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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Sang Woon Suh

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EXAMINER

ALUNKAL, THOMAS D

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/789,992	Applicant(s) SUH ET AL.	
	Examiner THOMAS D. ALUNKAL	Art Unit 2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 February 2011.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,5-7,10,11,13,17-20,23,24,41,42 and 44-51 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,5-7,10,11,13,17-20,23,24,41,42 and 44-51 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114 was filed in this application after appeal to the Board of Patent Appeals and Interferences, but prior to a decision on the appeal. Since this application is eligible for continued examination under 37 CFR 1.114 and the fee set forth in 37 CFR 1.17(e) has been timely paid, the appeal has been withdrawn pursuant to 37 CFR 1.114 and prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on 2/28/2011 has been entered.

Response to Arguments

Applicant's arguments filed 2/28/2011 have been fully considered but they are not persuasive.

Regarding the applicant's arguments beginning on page 10 of Remarks, the applicant argues that combined teachings of Sako et al. (hereafter Sako) in view of Ha fail to disclose all of the claimed limitations of claim 1. Specifically, the applicant argues "Column 17, lines 15-19 of Sako reads as "In this embodiment, the optical disc CDx includes three types: single-density disc, double-density disc and single-/double-density disc (only read-only type in which data is recorded in pits). Each of these three types of discs has ID data recorded in TOC information in the lead-in area thereof." According to the above column 17, lines 15-19 of Sako, the three types of optical disc CDx includes single-density, double-density and single-/double density disc. Further,

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these three types of discs are only read-only type in which data is recorded in pits.

However, the type of the medium of amended claim 1 is one of Read-only, Recordable and Rewritable. The characteristic of the type of the disc is different from that of Sako."

The Examiner respectfully disagrees.

Column 17, lines 15-19 of Sako disclose that each of the single-density, double-density, and single-/double-density discs are read-only types. Column 17, lines 27-31 further disclose that each of the discs has a single-density or double-density ID data as well as ID data as to the recording form of the disc (i.e., read-only type in which data is recorded in pits). Amended claim 1 requires that the "disc identification information" identify the recording medium as one of read-only, recordable, and rewritable. Sako discloses the disc as a read-only type. Therefore, the combined teachings of Sako in view of Ha disclose the argued limitations. Independent claims 13, 20, 42, and 49 include similar limitations, and the arguments pertaining to these claims are rebutted for the reasons provided above.

Claim Objections

Claim 44 is objected to because of the following informalities: Claim 44 recites "The apparatus of claim 41". This is believed to be a typographical error and should read "The apparatus of claim 42". Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 5, 6, 10, 13, 17, 19, 20, 42, 47 and 51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sako et al. (hereafter Sako)(WO 02/37493) and in view of Ha et al. (hereafter Ha)(US 7,028,011).

US Patent 7,215,610 is relied upon as the English equivalent to the WO document Sako et al.

Regarding claim 1, Sako discloses a computer readable medium including a lead-in area, a data area and a lead-out area (Figure 10), comprising: physical mark information recorded as a pit type, the pit type selected from at least one of wobbled pits and straight pits in a specific area of the lead-in area not writable by end user recorders (Figures 11A-11D, Column 17, line 15+ and Column 18, lines 23-56) and disc identification information identifying a type of the computer readable medium, the type being one of Read-Only, Recordable, and Rewritable (Column 17, lines 15-19 and 27-31 where the disc is identified as being a read-only type), wherein the physical mark information provides control information for controlling a reproduction of data recorded as straight pits on the data area and is formed along a modulated unique pattern (Column 18, lines 23-34 where the encrypted data in the lead-in area is used for the decryption of data in the data area of the disc), and wherein if the pit type is selected to

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be wobbled pits, at least a part of the wobbled pits forming the physical mark information is shifted from a central line of the wobbled pits (Figure 11D where the wobbled pits are shifted in a direction away from a central line of the wobbled pits). Sako does not specifically disclose wherein the disc identification information is recorded in an area preceding the lead-in area. Rather, Sako discloses that the disc identification information is recorded in a TOC provided in the lead-in area. In the same field of endeavor, Ha discloses a computer readable medium including disc ID information where the disc ID information is provided at one of a plurality of areas, including at a location preceding the lead-in area (Column 4, lines 34-57).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the teachings of Sako with the additional teachings of Ha, since such is considered merely an alternative location, i.e., a relocation of elements acknowledged in the prior art and no unexpected results are seen to occur from such a relocation.

Regarding claim 5, Sako discloses wherein the modulated unique pattern represents encryption information used in encrypting data of the data area (Column 18, lines 10-34).

Regarding claim 6, Sako discloses wherein the control information further includes copy management information indicating whether duplication of the data is allowed (Column 18, lines 30+).

Regarding claim 10, Sako discloses wherein the physical mark information is recorded on a position of the recording medium detectable at an initial stage of a servo

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operation carried out in an optical disc apparatus, separately from a decoding operation to be carried out in the optical disc apparatus (Figure 3, Element 42).

Regarding claim 13, this claim is drawn to the apparatus for forming the recording medium of claim 1. Sako discloses such an apparatus in Figure 3. Additionally, claim 13 recites limitations substantially similar to those recited in claims 1 and 5. Thus, claim 13 is rejected for the reasons provided above in claim 1 and 5, in addition to Figure 3 of Sako.

Regarding claim 17, Sako discloses wherein the forming step forms the physical mark information on a position of the recording medium being detectable at an initial stage of a servo operation carried out in an optical disc apparatus, separately from a decoding operation to be carried out in the optical disc apparatus (Figure 3, Element 42).

Regarding claim 19, Sako discloses recording copy management information indicating whether duplication of the data is allowed on the recording medium (Figures 8-9).

Regarding claim 20, this claim is drawn to the method of reproducing data from the recording medium of claim 1. Sako discloses the reproducing apparatus which performs the method steps in Figure 12. Additionally, claim 20 recites limitations substantially similar to those recited in claim 1. Thus, claim 20 is rejected for the reasons provided above in claim 1, in addition to Figure 12 of Sako.

Apparatus claim 42 is drawn to the apparatus corresponding to the method of using same as claimed in claim 20. Therefore apparatus claim 42 corresponds to method claim 20, and is rejected for the same reasons of obviousness as used above.

Regarding claim 47, Sako disclose wherein the disc identification information is further included in a sub area of the lead-in area (Column 17, lines 15-19).

Regarding claim 51, Sako discloses wherein the pit type selected from at least one of wobbled pits and straight pits in a specific area of a lead-in area of the recording medium is based on a type of the recording medium (Figures 11A-11D, Column 17, line 15+ and Column 18, lines 23-56), and the type of recording medium is one of Read-Only, Recordable, and Rewritable types (Column 17, lines 15-19 and 27-31).

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sako in view Ha, and further in view of Kuroda (US 6,683,844) as applied in the Office Action dated 7/6/09.

Claims 11, 18, 23, 24, 41, 44-46, and 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sako in view of Ha, and further in view of applicant's admitted prior art (unchallenged Official Notice) as applied in the Office Action dated 7/6/09.

Claims 49 and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sako in view of Horimai (US 5,563,872), and further in view of Ha et al. (hereafter Ha)(US 7,028,011).

Regarding claim 49, Sako discloses a method of forming a recording medium (Figure 12), comprising: forming an information area for recording disc management information and/or data (Figures 8-9); and forming physical mark information as a pit type, the pit type selected from at least one of wobbled pits and straight pits in a specific area of a lead-in area of the recording medium (Figures 11A-11D, Column 17, line 15+ and Column 18, lines 23-56), wherein the physical mark information provides control information for controlling a reproduction of data recorded as straight pits on a data area of the recording medium and is formed along a modulated unique pattern (Column 18, lines 23-34 where the encrypted data in the lead-in area is used for the decryption of data in the data area of the disc), wherein if the pit type selected is wobbled pits, at least a part of the wobbled pits forming the physical mark information wobbling manner with respect to a central line of the wobbled pits (Figure 11D), and wherein the modulated unique pattern represents encryption information used in encrypting data of the data area (Column 18, lines 10-34) and forming disc identification information identifying a type of the recording medium, the type being one of Read-Only, Recordable and Rewritable (Column 17, lines 15-19 and 27-31 where the disc is identified as being a read-only type). Sako does not specifically disclose wherein the wobbled pits are formed so as to not overlap with a central line of the wobbled pits. In the same field of endeavor, Horimai discloses an optical recording medium which includes wobbled pits

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formed in a manner so as to not overlap a central line from which the wobbled pits are shifted (Figure 5a). Horimai discloses that by forming the wobbled pits in such a manner, a single optical beam can accurately detect the wobbled pits on both sides of the track center (Column 7, lines 1-9).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to displace the wobbled pits of Sako at a predetermined distance so as to avoid overlap with a central line of the wobbled pits as disclosed by Horimai, motivation being to allow for accurate detection of wobbled pits on both sides of the track center.

Further, Sako does not specifically disclose wherein the disc identification information is recorded in an area preceding the lead-in area. Rather, Sako discloses that the disc identification information is recorded in a TOC provided in the lead-in area. In the same field of endeavor, Ha discloses a computer readable medium including disc ID information where the disc ID information is provided at one of a plurality of areas, including at a location preceding the lead-in area (Column 4, lines 34-57).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the teachings of Sako with the additional teachings of Ha, since such is considered merely an alternative location, i.e., a relocation of elements acknowledged in the prior art and no unexpected results are seen to occur from such a relocation.

Regarding claim 50, Sako discloses wherein the pit type selected from at least one of wobbled pits and straight pits in a specific area of a lead-in area of the

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recording medium is based on a type of the recording medium (Figures 11A-11D, Column 17, line 15+ and Column 18, lines 23-56), and the type of recording medium is one of Read-Only, Recordable, and Rewritable types (Column 17, lines 15-19 and 27-31).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to THOMAS D. ALUNKAL whose telephone number is (571)270-1127. The examiner can normally be reached on M-F 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wayne Young can be reached on (571)272-7582. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Thomas D Alunkal/
Examiner, Art Unit 2627

/Wayne Young/
Supervisory Patent Examiner, Art Unit 2627